

FP03-0436-00

WHAT IS CLAIMED IS:

1. A method of manufacturing fiber-reinforced thermoplastics, comprising:
 - a mixing step for mixing an uncured thermosetting resin with reinforcing fibers to obtain a mixture; and
 - 5 a reaction step for forming a thermoplastics by causing a polymerization reaction of the thermosetting resin in the mixture so that the thermosetting resin polymerizes.
- 10 2. The method according to Claim 1, wherein said reinforcing fibers constitute a reinforcing fiber knitted web.
3. The method according to Claim 1 or 2, wherein said reinforcing fibers are glass fibers.
- 15 4. The method according to any of Claims 1-3, wherein, in the thermoplastics obtained in the reaction step, the softening point at which the storage modulus (Pa) is 1/10 of the storage modulus (Pa) at 300 K is between 310-450K, and at a temperature equal to or above the softening point, the storage modulus (Pa) is 1/100 of the storage modulus (Pa) at 300 K or less.
- 20 5. The method according to any of Claims 1-4, wherein, in the thermoplastics obtained in the reaction step, the value of $(E_1 - E_2)/(T_2 - T_1)$ when the storage moduli (Pa) at temperatures (K) T₁ and T₂ ($T_1 < T_2$) below 450K are respectively E₁ and E₂, is $1 \times 10^5 - 1 \times 10^{10}$ (Pa/K).
- 25 6. The method according to any of Claims 1-5, wherein said uncured thermosetting resin comprises a first reactive compound and a second reactive compound, and said polymerization reaction is a polyaddition

FP03-0436-00

reaction or polycondensation reaction between said first reactive compound and said second reactive compound.

7. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two epoxy groups, said second reactive compound is a bifunctional compound having two functional groups selected from among phenolic hydroxyl, amino, carboxyl, mercapto, isocyanate and cyanate ester, and said polymerization reaction is a polyaddition reaction.

10 8. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two isocyanate groups, said second reactive compound is a bifunctional compound having two functional groups selected from among hydroxyl, amino and mercapto, and said polymerization reaction is a polyaddition reaction.

15 9. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two oxazoline groups, said second reactive compound is a bifunctional compound having two carboxyl groups, and said polymerization reaction is a polyaddition reaction.

20 10. The method according to Claim 6, wherein said first reactive compound is a tetracarboxylic acid dianhydride, said second reactive compound is a bifunctional compound having two functional groups selected from among hydroxyl and secondary amino, and said polymerization reaction is a polyaddition reaction.

25 11. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two (meth)acryloyl groups, said second reactive compound is a bifunctional compound

FP03-0436-00

having two functional groups selected from among amino and mercapto, and said polymerization reaction is a polyaddition reaction.

12. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two allyl groups, said second reactive compound is a bifunctional compound having two mercapto groups, and said polymerization reaction is a polyaddition reaction.

10 13. The method according to Claim 6, wherein said first reactive compound is an organopolysiloxane having two hydrogen atoms, said second reactive compound is an organopolysiloxane having two vinyl groups, and said polymerization reaction is a polyaddition reaction.

15 14. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two carboxyl groups, said second reactive compound is a bifunctional compound having two primary amino groups, and said polymerization reaction is a polycondensation reaction.

20 15. The method according to Claim 6, wherein said first reactive compound is a tetracarboxylic acid dianhydride, said second reactive compound is a bifunctional compound having two isocyanate groups, and said polymerization reaction is a polycondensation reaction.

25 16. The method according to Claim 6, wherein said first reactive compound is a bifunctional compound having two hydroxyl groups, said second reactive compound is a bifunctional compound having two functional groups selected from among carboxyl, ester and haloformyl, and said polymerization reaction is a polycondensation reaction.

17. A fiber-reinforced thermoplastics, manufactured according to the

FP03-0436-00

method described in any of Claims 1-16.